

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Artur Andrzejak et al.

Confirmation No.:

Application No.:

Examiner:

Filing Date:

Group Art Unit:

Title: DETERMINATION OF ONE OR MORE VARIABLES TO RECEIVE VALUE CHANGES IN  
LOCAL SEARCH SOLUTION OF INTEGER PROGRAMMING PROBLEM

COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Statement under 37 CFR 1.97(e), or  
☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97 (d) together with a:  
☐ Statement under 37 CFR 1.97(e)(1) or (2), and  
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

☒ Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. EU687335871US

Date of Deposit July 25, 2003

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Washington, D.C. 20231

By

Typed Name: Daniel Ratoff

Respectfully submitted,

Artur Andrzejak et al.

By

D rek J. Westberg

Attorney/Agent for Applicant(s)

Reg. No. 40,872

Date: July 25, 2003

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

**200208414-1**

APPLICATION NO.

CONFIRMATION NO.

APPLICANT

**Artur Andrzejak et al.**

FILING DATE

GROUP

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	6,526,420-B2	Feb. 25, 2003	Borowsky et al.	
	1B	6,031,984-A	Feb. 29, 2000	Walser	
	1C				
	1D				
	1E				
	1F				
	1G				
	1H				
	1I				
	1J				
	1K				

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L					
	1M					
	1N					
	1O					
	1P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

1Q	SVEN GRAUPNER, VADIM KOTOV, ARTUR ANDRZEJAK, HOLGER TRINKS, Control Architecture for Service Grids in a Federation of Utility Data Centers, HP Labs Technical Report HPL-2002-235, Hewlett-Packard Company, Palo Alto, August 21, 2002. < <a href="http://www.hpl.hp.com/techreports/2002/HPL-2002-235.pdf">http://www.hpl.hp.com/techreports/2002/HPL-2002-235.pdf</a> >
1R	ARTUR ANDRZEJAK, SVEN GRAUPNER, VADIM KOTOV, HOLGER TRINKS, Algorithms for Self-Organization and Adaptive Service Placement in Dynamic Distributed Systems, HP Labs Technical Report, HPL-2002-259, Hewlett-Packard Company, Palo Alto, September 2002. < <a href="http://www.hpl.hp.com/techreports/2002/HPL-2002-259.pdf">http://www.hpl.hp.com/techreports/2002/HPL-2002-259.pdf</a> >
1S	CIPRIANO SANTOS, XIAOYUN ZHU, HARLAN CROWDER, A Mathematical Optimization Approach for Resource Allocation in Large Scale Data Centers, HP Labs Technical Report, HPL-2002-64(R.1), Hewlett-Packard Company, Palo Alto, 2002. < <a href="http://www.hpl.hp.com/techreports/2002/HPL-2002-64R1.pdf">http://www.hpl.hp.com/techreports/2002/HPL-2002-64R1.pdf</a> >

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2Q	PARAMESWARAN RAMANATHAN, SURESH CHALASANI, Resource Placement with Multiple Adjacency Constraints in K-ary n-Cubes, IEEE transactions on Parallel & Distributed Systems, May 1995, Vol. 6, No. 5, pp. 511-519, IEEE Press, Los Alamitos, 1995.
2R	SVEN GRAUPNER, VADIM KOTOV, HOLGER TRINKS, Resource-Sharing and Service Deployment in Virtual Data Centers, The 22nd International Conference on Distributed Computing Systems Workshops, Vienna Austria, July 2-5, 2002, pp. 666-671, IEEE Computer Society, Los Alamitos, 2002.
2S	CHRISTODOULOUS A. FLOUDAS, V. VISWESWARAN, Quadratic Optomization, Handbook of Global Optimization, pp. 217-269, Kluwer Academic Publishers, Boston, 1995.

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3Q	JOACHIM P. WALSER, Solving Linear Pseudo-Boolean Constraint Problems with Local Search, Proceedings of the Fourteenth National Conference on Artificial Intelligence and the Ninth Innovative Applications of Artificial Intelligence Conference, July 27-31, 1997, Providence, Rhode Island, pp. 269-274, AAAI Press, Menlo Park, 1997.
3R	BART SELMAN, HECTOR LEVESQUE, DAVID MITCHELL, A New Method for Solving Hard Satisfiability Problems, Proceedings of the Tenth National Conference on Artificial Intelligence July 12-16, 1992, San Jose, California, pp. 440-446, AAAI Press, Menlo Park, 1992.
3S	DAVID ABRAMSON, HENRY DANG, MOHAN KRISHNAMOORTHY, A Comparison of Two Methods for Solving 0-1 Integer Programs Using a General Purpose Simulated Annealing Algorithm, Annals of Operations Research, v. 63, pp. 129-150, Baltzer Science, Amsterdam, Netherlands, 1996.

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4Q	JOACHIM PAUL WALSER, Domain-Independent Local Search for Linear Integer Optomization, Dissertation, Progamming Systems Lab, Universität de Saarlandes, Saarbrücken, Germany, October, 1998.
4R	BART SELMAN, Greedy Local Search in MIT Encyclopedia of the Cognitive Sciences, MIT Press, Cambridge, 1999.
4S	BART SELMAN, HENRY A. KAUTZ, BRAM COHEN, Local Search Strategies for Satifiability Testing Presented at the Second DIMACS Challenge on Cliques, Coloring, and Satisfiability, October 11-13, 1993, Piscataway, New Jersey.

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<b>FORM PTO-1449</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	ATTY. DOCKET NO. <b>200208414-1</b>	APPLICATION NO.	CONFIRMATION NO.
	APPLICANT <b>Artur Andrzejak et al.</b>		
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5Q	BART SELMAN, HENRY A. KAUTZ, BRAM COHEN, Noise Strategies for Improving Local Search, Proceedings of the Twelfth National Conference on Artificial Intelligence, August 1-4, 1994, Seattle, Washington, pp. 337-343, AAAI Press, Menlo Park, 1994.
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